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The Relationship Between Teachers' Beliefs and Practices in Reading Comprehension Instruction

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This article presents the findings of a study designed to determine the relationship between teachers' beliefs about the teaching of reading comprehension and their classroom practices. The study, dealing with teachers from grades 4, 5, and 6, uses a beliefs interview technique borrowed from anthropology. Predictions about teaching practices were made from the belief interviews of 39 teachers and were related to practices observed in their classrooms. The study demonstrates that the beliefs of teachers in this sample relate to their classroom practices in the teaching of reading comprehension. A case study explores a situation in which the teacher's beliefs did not relate to her practices. This case suggests that the teacher was in the process of changing beliefs and practices, but that the changes in beliefs were preceding changes in practices.

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The small but expanding literature on teachers' conceptions and theories of practice suggests that ignoring teachers' beliefs in implementing change could lead to disappointing results. Results of studies by Hollingsworth (1989), Munby (1984), and Richardson (1989) imply that the way teachers adapt or adopt new practices in their classrooms relates to whether their beliefs match the assumptions inherent in the new programs or methods. Thus understanding teachers' beliefs may be helpful to the development and implementation of new programs and effective in-service education. However, before suggesting that change efforts should focus on beliefs and cognitions, it would be important to determine the nature of the relationship between teachers' beliefs and their classroom actions.¹

Attempts at both determining teachers' beliefs and theories and relating them to their actions have led to contradictory results. In the field of reading, Harste and Burke (1977) described their research-in-progress that they felt supported the conclusion that "despite atheoretical statements, teachers are theoretical in their instructional approach to reading" (p. 32). Deford (1985) developed a multiple-choice instrument (TORP) designed to differentiate among teachers on the basis of theoretical orientation toward reading (phonics, skills, whole language), and validated it by predicting a sample of teachers' theoretical orientations on the basis of classroom observation. She found a strong relationship between the TORP scores and the predictions.

On the other hand, after a 3-year study of teachers' instructional decisions, Duffy (1981) concluded that teachers' theoretically based conceptions are not related to their teaching of reading practices. Hoffman and Kugle (1982), using the TORP measure, also found a lack of correlation between teachers' theoretical orientations and specific classroom behaviors that were assumed to accompany specific theoretical orientations. However, the instruments used in most of these studies were paper-and-pencil measures of theoretical orientations derived from the scholarly literature. Hoffman and Kugle (1982) suggested:

It would be easy to conclude that for most teachers there is no strong relationship between teacher beliefs and teacher behaviors. It would be more reasonable based on the findings from the focused interviews, however, to bring to question the notion that we can validly assess beliefs through a paper-and-pencil type task. (p. 6)

Perhaps the measurement problem referred to by Hoffman and Kugle (1982) also explains the contradictory results in the general teaching literature in studies of the relationship between teachers' reports of behaviors and beliefs, and observations of their classroom practices. Hook and Rosenshine (1979) reviewed this literature and found a low correlation between teacher reports and observer ratings of many different teacher behaviors. However, if the responses were grouped into more global dimensions or general styles

(such as open versus traditional), groups of teachers with similar styles were found to behave differently than other groups with different styles. Bauch (1982, 1984) found a relationship between beliefs concerning teacher control and student participation, and observed classroom grouping arrangements, but not other observed practices. Most of the studies reviewed by Hook and Rosenshine (1979), as well as Bauch's study, used paper-and-pencil questionnaires to determine beliefs and self-reported practices.

The purpose of this article is to present findings of a study designed to determine the relationship between teachers' beliefs about the teaching of reading comprehension and their classroom practices. The study, dealing with teachers from grades 4, 5, and, 6, uses a beliefs interview technique borrowed from anthropology rather than a paper-and-pencil measure. The study looks quantitatively at the overall relationship between beliefs and practices, and qualitatively at the case data to develop an understanding of situations in which beliefs and practices do not match. It is hoped that the findings will demonstrate that an understanding of a teacher's practices, and potential changes in those practices, is enhanced by observations of the teacher in combination with the elicitation of the teacher's verbal commentary on beliefs and practices.

Specifically, 39 teachers were interviewed about their beliefs and practices in reading, and their reading lessons were observed. A subset was also videotaped. The belief interviews were analyzed by two of the authors, who had not participated in the observations, to predict how each teacher would approach the following reading instruction practices deemed important in current research and practice discussions: use of basal readers, consideration of students' background knowledge, use of oral or silent reading, and the teaching of vocabulary. The observation narratives and videotapes were analyzed by the two authors who had not interviewed the teachers to determine the teachers' classroom practices in the four areas of interest. Thus, it was possible to conduct a relationship study, as well as look at specific and interesting cases.

Framework

Teachers' beliefs and theories. Considerable research interest has recently focused on teachers' ways of knowing and their origins (Carter, 1990). This literature investigates the nature of teachers' practical knowledge (Elbaz, 1983), situational knowledge (Leinhardt, 1988), images (Calderhead, 1988), knowledge-in-action (Schon, 1982), practice-generated theories (Jordell, 1987), and practical arguments (Fenstermacher, 1986; Morine-Dersheimer, 1987). While there is an assumption in this work that these ways of knowing affect classroom actions, little empirical work has focused on this relationship.

Following Magoon (1977) and Deford (1985), we selected a constructivist perspective on teachers' cognitions that suggests that teachers are

knowing beings and that this knowledge influences their actions: "Knowledge, then, forms a system of beliefs and attitudes which direct perceptions and behaviors" (Deford, 1985, pp. 352-353). In this formulation, theories or theoretical orientations consist of sets or systems of individual beliefs. For purposes of this study, we used Harvey's (1986) definition of a belief system as a "set of conceptual representations which signify to its holder a reality or given state of affairs of sufficient validity, truth and/or trustworthiness to warrant reliance upon it as a guide to personal thought and action" (p. 660).

In a manner similar to a number of researchers on teaching (Bussis, Chittenden, & Amarel, 1976; Eisenhart, Shrum, Harding, & Cuthbert, 1986; Ignatovich, Cusick, & Ray, 1979; Munby, 1983; Olson, 1981; Smith & Shepard, 1988), we decided to elicit teachers' beliefs and theories inductively. The belief interviewers used an adaptation of the heuristic elicitation technique, developed by anthropologists to determine belief systems in groups of people (Black & Metzger, 1969; Metzger, 1973). Within this framework, beliefs consist of a set of assertions held by informants and realized in the natural language as declarative sentences. This methodology uses both open-ended questions to construct the informants' propositions about the world and closed-ended questions to establish the interviewers' understanding of the response.

Reading comprehension. The content of the beliefs and theories that we investigated was reading comprehension. This topic, we felt, would provide for considerable variance in teachers' belief systems due to the nature of the field. The variance in teachers' beliefs is typically described as falling somewhere between the belief that reading is a skill that begins and ends with decoding and the belief that reading is a transactional process between a reader and a text within a social context. Coincidentally, reading theories in the scholarly literature may also be described in this way (Harste & Burke, 1976).

Since the 1940s, mainstream reading instruction has relied on published basal reading programs, which provide teachers with a scope and sequence of skills and students with skills practice sheets, and reading texts characterized by controlled vocabulary of increasing difficulty. The inclusion of literature has varied, with some programs providing authentic literature but most rewriting stories to fit the grade level of the students for whom the program is designed. The emphasis on decoding has also varied, with some programs providing synthetic phonics and others providing students with opportunities to decode words using many cuing systems. Within the last several years, these basal programs have been under attack.

The newer approaches to the teaching of reading are related to various notions of the construction of meaning. One approach has its roots in schema theory. This theory suggests that knowledge is structured in large, complex, abstract units of organized information schemata (Rumelhart,

1981). Learners understand text by determining how the ideas they read relate to their existing schemata or knowledge. This description implies that comprehension is a constructive process in which readers interpret text according to their own understandings or, sometimes, misunderstandings (Spiro, 1980). Another approach, the "whole language" movement, calls for authentic literature to be used in meaningful ways (Goodman, 1986). Both approaches challenge the notion of a scope and sequence of skills.

Thus, the field of reading is in flux. There is no universal agreement on theoretical orientations or approaches to the teaching of reading among researchers and practitioners. We would expect, therefore, some variations in teachers' beliefs as well as their classroom practices.

Like Hoffman and Kugle (1982), we decided to focus on specific classroom activities that could be predicted from the belief interviews and observed in the teachers' classrooms. The behaviors that we focused on were those that were determined, analytically, to differentiate between the skills/word and the cognitively oriented theoretical orientations. We wanted to determine whether the teachers used basal readers in the teaching of comprehension and, if so, whether the basals were used flexibly or inflexibly; whether the teachers asked students to read orally or silently and, if oral reading was practiced, whether the teachers interrupted the students if they made an error in pronunciation; whether the teachers considered students' background knowledge; and whether vocabulary was taught in or out of context. These categories are displayed in Figure 1.

The Study

Subjects

Thirty-nine intermediate teachers from six elementary schools in two southwestern school districts voluntarily participated in the study. There were 9 males and 30 females in the sample, and the years of experience ranged from 1 to 32 years. The grade level and subject matter taught are delineated in Table 1.

Table 1
Grade Level and Subject Matter of Sample of Teachers

Grade	Rdg.	L.A.	Soc.St.	Writ.	SpEd/LD	Sci.	Total
4	11	1					12
5	5	1	3	1		1	11
6	6	2	1				9
3-4			1				1
4-5	3						3
4-6					3		3
Total							39

Table 2
Design of Relationship Study

Time	Prediction of practices from interviews	Analysis of observations	
		Classroom narratives	Videotapes
Fall/ Winter 87	38 teachers interviewed in extensive belief interviews.	38 teachers observed twice, using narrative forms.	
Spring 88	Interviews coded, theories extracted from interviews.	Narratives coded for practices.	
Fall 88	1 new-to-project teacher interviewed.		14 of the teachers videotaped prior to staff development.
Spring/ Summer 89	Determination of practices that could be both predicted from interviews and extracted from narratives and videotapes of observations.		
	Predictions of practices made from interviews.	Narratives and videotapes analyzed for practices.	
Fall 89	Two analysis sets brought together for relationship study.		

Data Collection

The data used for this analysis were taken from a larger 3-year study that included an action research component. Table 2 presents an overview of the data collection for this particular analysis.

Belief Interviews

Two interviewers practiced the heuristic elicitation technique by each interviewing a teacher and listening to the tapes of the interviews and then discussing the process. The interview guide is included in Appendix A and consists of a set of questions designed to elicit the teachers' declared or public beliefs about reading comprehension and how children learn to read in general, and a second set designed to elicit more private beliefs (Good-enough, 1971), or beliefs in action, by asking teachers to talk about specific students. Thirty-eight teachers were interviewed during the winter/spring of 1987/88, each interview averaging 1 hour in length (see Richardson & Hamilton, 1988, for a thorough description of the process). A new-to-the-

project teacher in one of the schools was interviewed in the fall of 1988. The interviews were audiotaped and transcribed.

Observations

During the fall/winter of 1987, the 38 teachers were observed twice at a time they said they were teaching reading comprehension by observers who had been trained over a 3-week period to produce high interrater reliability (see Lloyd, Tidwell, Mitchell, Gallego, & Batchelder, 1988, for details). A timed narrative record was used to record classroom events that happened during the observation period. The instrument required observers to record as accurately as possible what the teacher was saying during the lesson and to record, in shorthand, teacher and student actions. This technique is similar to one commonly used during classroom observations for clinical supervision (Goldhammer, Anderson, & Krajewski, 1980). The narratives were written in 10-minute cycles, between which 2-minute "sweeps" were conducted during which the observer noted classroom characteristics and student activity. The handwritten notes were typed using a common format.

During the fall, 1988, a subset of the teachers and a new teacher to one of the schools—14 teachers in all—were videotaped during reading instruction. These tapes were taken before a staff development program was provided in three of the schools, and were later used as an element of the program to allow teachers to examine their beliefs and empirical premises in conjunction with those of current research on reading instruction. These tapes were used as additional evidence concerning the teachers' practices.

Data Analysis

Predictions from the belief interviews. Chunks of dialogue were coded in the belief interviews using Glaser and Strauss's (1967) constant comparative method to develop the coding categories. The coding categories are included in Appendix B. A number of these codes were employed for this particular study, using a computerized qualitative data manager, Free Filer, to sort the coded chunks of dialogue. The codes used here were the following: Learning to Read, Reading, Reading Comprehension, Teaching Reading, and Basals. Two analyses of the coded material provided input into the predictions. The first judged teachers' theoretical orientations, and the second examined individual beliefs about reading and learning to read.

1. *Theoretical Orientations:* In examining the teachers' comments about teaching reading and learning to read, it appeared that teachers could be placed along a dimension that moved from a word and skills approach to a literature approach. This dimension seemed to apply to both the teaching of reading and learning to read. In fact, beliefs about teaching and learning melded together in most of the interviews. At one end of the dimension was the notion that learning to read involved learning a set of skills, most

of which revolved around recognizing and understanding the meaning of the word. Teaching, therefore, involved instructing the students and giving them practice in word attack skills and working with them in vocabulary. At the other end was the notion that one learned to read by reading, and the role of the teacher was to put students in contact with literature that would interest and motivate them to read.

Teachers could be arrayed easily along this continuum. Each appropriate statement in each of the interviews was placed on one of five points along the dimension, and these were averaged for the final placement. For example, several teachers who were quite strongly literature-oriented also stated that they used basals for the stories and taught skills, but primarily because the district expected them to do so and students had to pass tests on the skills. However, they did not feel that the skills had much to do with learning to read. Such teachers were ultimately placed three-quarters of the way along the teaching/learning reading continuum, on the literature side. Likewise, some skills/word teachers had their students reading library books and performing in plays; however, these activities were meant to motivate the students, not necessarily to teach them reading. These teachers were placed a quarter of the way along the reading/teaching reading continuum on the skills/work side.

It became clear, also, that there was a second dimension called "Reading/Purpose of Reading." This dimension reflects the teachers' definitions of reading comprehension and their sense of where meaning is contained. The two ends of the continuum are "Constructivist" (meaning is derived from an interaction between the student and the text) and "The Meaning is in the Text." Most teachers did not differentiate between notions of what reading is and the purpose of reading.

In order to determine the teachers' theoretical orientation toward reading comprehension, each teacher was placed in one of four quadrants formed from the two dimensions.²

2. Individual Belief Statements: Individual belief statements that related to the teaching categories were used in part for determining the teachers' theoretical orientations, but were also used to predict specific classroom actions. There were four types of belief statements:³

- Empirical Premise: This is a claim that empirical evidence would establish as true or false. For example, "One factor that causes differences between good and poor readers is backgrounds, seeing parents reading a lot, being read to. Another is academic—being classified as nonreaders. It's not that they can't read; it's that they don't concentrate."(Ci)⁴
- Stipulative Premise: This is an analytic statement in which the meaning is stipulated. For example, "Reading comprehension is the ability to read and then be able to tell that you've read in your own words,

to me, because you've read it, you've internalized it, and now you're able to say it back." (Ac)

- Value Premise: This is a claim about what should or ought to be the case. For example, "I hope that by the time they're done in here that they've gotten used to reading about lots of different places, lots of different things, gotten turned on by some kinds of reading somehow." (Af)
- Description of Classroom Practice: This is a statement about how the teachers teach reading in their classrooms. For example, "When we have reading groups and we read, I ask them to write the answers, give complete sentences to the questions in the book." (Ea)

Predictions of classroom practices were made by the two authors who had interviewed the teachers initially, but had not observed the teachers in their classrooms. The predictions were made on the basis of the teachers' theoretical orientations, as well as individual beliefs about reading and statements that described their reading program.⁵ The categories of predictions are depicted in Figure 1, and described below.

1. Use of Basal Readers: Predictions about the use of basal readers were made on the basis of teachers' descriptive statements about how they taught reading and their empirical premises that indicated the degree to which they viewed reading instruction as teaching a set of skills or as bringing students into contact with literature or content they would enjoy. If the teacher was designated as a basal reader user, we predicted whether the teacher would adhere inflexibly or flexibly to it. For example, one teacher stated that she used the basal because "it was written by experts" who "know what skills are important." She was categorized as using the basal inflexibly. In contrast, a teacher who stated that she uses the basal with modifications by adding literature or that some of the skills in the basal are not related to reading, was categorized as using the basal flexibly.⁶

2. Consideration of Students' Background Knowledge: This prediction concerned whether the teachers would activate and use their students' background knowledge strongly or weakly, if at all. These predictions were based on the teachers' descriptions of their reading programs and also on their theoretical conceptions of the teacher's role in reading comprehension instruction and the location of meaning. We predicted that those teachers who operate from a transfer-of-knowledge framework (that is, knowledge is transferred from the text or teacher directly to the students) and also express the belief that meaning resides in the text, would use students' background knowledge in a weak manner or not at all.

3. Oral Reading and Interruption of Students' Oral Reading: We used teachers' statements about their reading programs in combination with their view of reading to predict whether teachers ask students to read orally to focus on accuracy and fluency or silently to focus on meaning. For example,

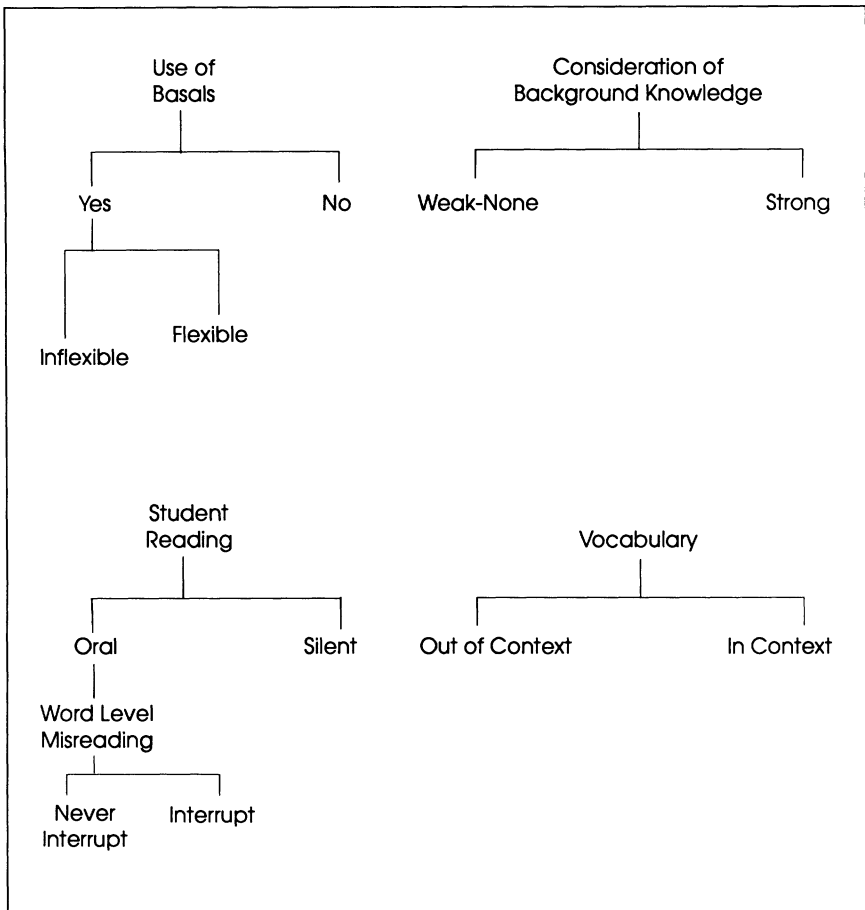


Figure 1. Reading practices categories

a number of teachers defined good reading as being able to read out loud, fluently, and flawlessly, with expression. There were also those who suggested that accurate word pronunciation is the first step in understanding meaning. Such teachers, we predicted, would interrupt students to correct for pronunciations.

4. The Teaching of Vocabulary: The predictions concerning the teaching of vocabulary focused on whether teachers would teach vocabulary in the broad context of what was read or what was to be read, or out of this context. This was predicted partially on the basis of their descriptions of practice and also on the degree to which their theories of reading and teaching reading exhibited a word or decoding emphasis. Thus, when teachers stated a belief that reading comprehension starts from the meaning of the word and builds word by word, we predicted that they would gener-

ally begin a reading lesson by presenting students with a list of words that they would pronounce and look up in the dictionary.

Analysis of observations. While the analyses of the observations provided information that could be compared to the predictions from the belief interviews, the analyses also provided more in-depth descriptions of the teachers' practices. Thirty-eight teachers⁷ were observed using narrative records and 13 of these plus one additional teacher were videotaped during their reading lessons. Their instruction was analyzed in the same four categories of reading practices described previously. What follows is a description of how each of these categories was operationalized.

1. Use of Basal Readers: To analyze teachers' use of basal readers during reading instruction, we examined lessons which included basals to determine the degree to which a teacher used the particular lesson format suggested in the basal reader. Teachers' practices in this category were then classified as being either inflexible or flexible.

Inflexible use referred to a teacher's close adherence to the basal lesson found in the teacher's manual. Flexible use referred to instruction that deviated noticeably from the lesson in the teacher's manual. This instruction could be characterized by teachers using the basal mainly as a source of reading material.

2. Consideration of Student's Background Knowledge: This analysis focused on specific instructional segments within a lesson where student background knowledge was addressed. A previous analysis of these observations (Mitchell, Clarridge, Gallego, Lloyd, & Tidwell, 1988) identified the following teacher practices that addressed background knowledge: (a) reminding students of a previous lesson or experience; (b) asking students about their previous experience or knowledge; (c) telling their own experiences; (d) providing background information; and (e) providing background experiences.

How a teacher considered students' background knowledge in their instruction was divided into two categories: strong consideration and weak or no consideration. Strong consideration referred to teacher instruction that incorporated background knowledge in an integrated and meaningful way (for example, reading a story to the students that provided background knowledge for the upcoming story to be read, followed by students engaging in a discussion of their own similar experiences). Weak or no consideration referred to teacher instruction that incorporated background knowledge into the lesson through mentions or reminders, involving little or no student interaction.

3. Oral Reading and Interruptions of Students' Oral Reading: First, it was determined whether or not teachers had students read the text orally. Next, teachers' responses to oral recitation were analyzed according to the following categories: (a) no interruptions, (b) interruptions signaled by students' misreading or hesitancy, and (c) interruptions with no clear signal.

4. Teaching of Vocabulary: How teachers addressed vocabulary instruction was categorized according to their consideration of context. When teachers presented words without directly relating their meaning to the text, these practices were categorized as out of context. Examples of these practices are pronouncing the word, giving or asking for definitions, and presenting words in the context of the sentence (not from the story). When teachers discussed the meanings within the context of the ideas in the text, these practices were categorized as in-context vocabulary instruction. These practices typically occurred during or after a text was read.

The relationship substudy. Teachers received a 1, 2, or 0 in each of the categories from the three data sources of interviews, narratives, and videotapes. A designation of 1 stood for use of basals, inflexible use of basals, weak or no consideration of background knowledge, oral reading, no interrupting, and out-of-context vocabulary. A designation of 2 stood for nonuse of basals, flexible use of basals, strong consideration of background knowledge, silent reading, interrupting during oral reading, and in-context vocabulary. A designation of 0 indicated that the activity was not observed at all (for example, a skills lesson in which students did not read a passage) or the category was not applicable for that teacher (for example, a teacher who asks students to read silently would not correct mispronunciation). Only those categories with a designation of 1 or 2 were used in this relationship study. The number of agreements between interview predictions and narrative and videotape observations were tallied in each category, and the percentage of agreement was determined.

Case studies. Cases in which the predictions from interviews and observations did not match were examined to draw themes (Spradley, 1982) that describe the nature of the mismatches. The observations and interviews were first separately examined to determine if there were categories with which to classify those that exhibited strong mismatches between beliefs and practices. For example, a number of teachers' interviews exhibited a lack of coherence between public or declared beliefs and private beliefs or beliefs in action. It was then possible to consider interviews and observations together to analyze the way in which these contradictions played out in classroom practices.

Findings

Interview

Teachers' theories of reading. Each teacher was placed in one of four quadrants depending upon his or her position on the two continua, one representing the location of meaning and the other representing the teaching of reading. Although the continua were established from the teachers' own beliefs, three of the quadrants came close to representing three main approaches to reading or the study of literature, as represented in the scholarly

literature. Quadrant I represents a skills/word approach in which the subskills of reading must be learned before the meaning of the text can be determined, and the purpose is to determine what the author meant. Quadrant II embodies a literary structuralist approach in which learning to read is accomplished by reading, and the purpose is to determine what the author meant. The whole language philosophy is represented in Quadrant III, in which authentic literature is used as a vehicle through which students construct meaning. Quadrant IV is unique and does not represent an extant approach. In this quadrant, a skills approach leads to the construction of meaning. Appendix C presents short vignettes of one teacher from each of the four quadrants. Figure 2 places each teacher in one of the four quadrants.

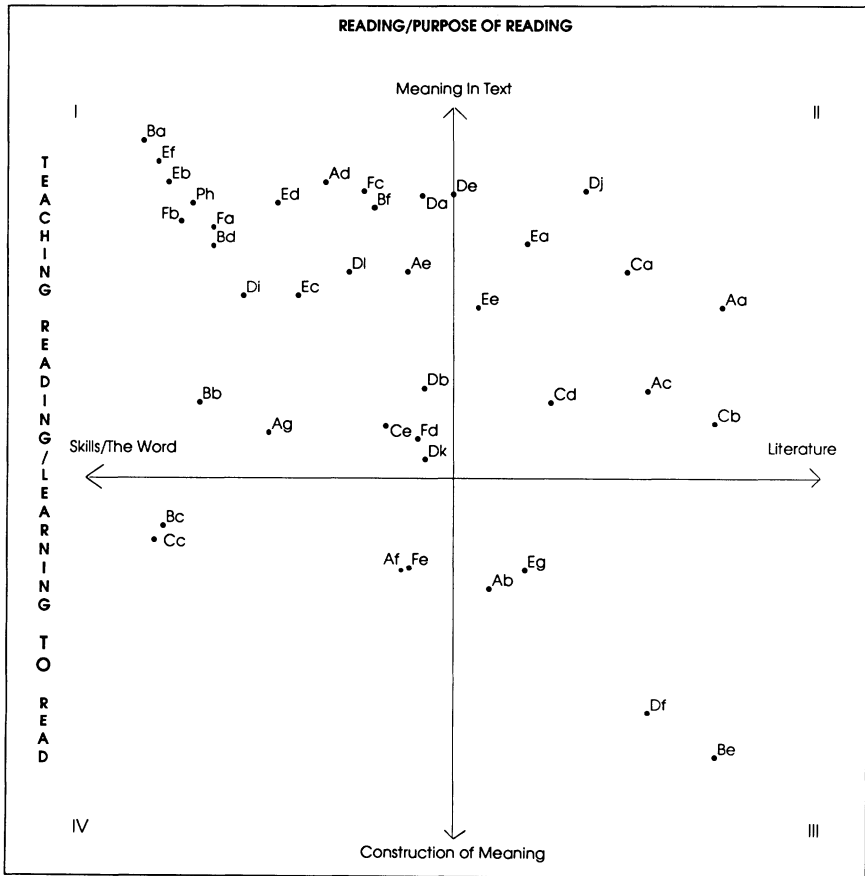


Figure 2. Teachers' theories of reading comprehension

Table 3
Numbers of Teachers Categorized by Reading Practice

Reading practice	Interview		Narrative observation		Videotape observation	
	yes	no	yes	no	yes	no
Uses basal	32	7	31	7	10	4
Inflexible ^a	10	22	21	10	4	6
Consideration of back. knowledge ^b	9	30	8	30	5	9
Oral reading ^c	30	9	26	4	9	3
Interruptions ^d	25	5	15	11	9	–
Vocabulary in context ^e	21	18	15	16	6	5

^aFor those who used the basal, would or did they use it in an inflexible manner? ^bWould or did they make extensive and authentic use of students' background knowledge or very little use, if at all. ^cWould or did they ask students to read passages orally or silently? ^dFor those who have their students read orally, did they interrupt students when they mispronounced a word? ^eWould or did they teach vocabulary out of context of the reading passage, or in context? (Some teachers did not teach vocabulary.)

As shown in Figure 2, a majority of teachers were placed in Quadrant I. There also appear to be no systematic differences among grade levels or other differentiating factors, except for the fact that all the learning disabilities teachers are found in Quadrant I.

Predictions in four instructional areas. Table 3 summarizes the data on the categories of reading practices by the source of the data. Column 1 shows the predictions from the interviews. The prediction was made, for example, that 32 teachers would use the basal. The next category suggests, however, that 22 of those would use the basal flexibility. It was predicted from the interview that very few teachers (9) would consider students' background knowledge. Given the numbers of teachers in Quadrant I, this is not surprising. Predictions were made that 9 teachers would ask students to read silently and 30 would ask students to read orally. Of these 30 teachers, it was predicted that 25 would interrupt when a student mispronounced a word. The last category summarizes the data on whether teachers would teach vocabulary out of context (18) or in context (21).

Observation

Descriptions of practice in four instructional areas. In addition to the global categorization of practices shown in Table 3, we were able to develop descriptive subcategories of practices using the narrative records and videotapes. These subcategories are described in the following paragraphs.

1. Use of Basal: As indicated in column 2 of Table 3, 31 of the 38 teachers were observed using basal readers during reading instruction.

Twenty-one of those teachers were categorized as inflexible in their use, while 10 were categorized as flexible. Of the 14 teachers who were also videotaped, 10 used basals during reading instruction, 4 being inflexible and 6 flexible.

2. Consideration of Students' Background Knowledge: Eight of the 38 teachers were judged as considering students' background knowledge in their lesson presentations as described by the narratives. Five out of 14 teachers incorporated background knowledge in lessons that were videotaped. In addition, videotapes provided elaboration on the quality of teachers' background knowledge instruction labeled as strong. Such instruction included the following:

- background experiences [Example: honey taste tests as a prereading activity for a story about beekeeping (Fc)].
- background information [Example: teacher orally reads a ghost story, with children reading from cue cards the scary sounds in the text as a prereading activity for a story with similar text structure and vocabulary of sounds (Fd)].
- integration of students' background knowledge [Example: during the reading of a story, teacher provides prompt questions that get students actively involved in a discussion of their own knowledge of what is real about animals and how that is different or the same from the way the author depicts animals (Fa)].
- relation to previous lesson [Example: teacher relates skills to previous lesson by having students brainstorm what they remember and recording answer on board, tying in present lesson to information on board (Ab)].
- own experiences [Example: teacher shares own story of experience with trains as part of prereading for a story about a train that doesn't run (Ab)].

Other background knowledge practices included reminding students of information from a previous lesson; asking students about their experiences—teacher asking students to share their experiences; asking students about their knowledge; telling their own experience about text ideas or about strategy, process, or skill; and providing background information through analogy/similar situation or by directly telling information.

3. Oral Reading: The nature of the data-gathering process used in the initial classroom observations made possible a clear determination of whether teachers used oral reading and whether teachers interrupted during oral reading. Oral reading observations taken from the videotapes provided a more accurate appraisal of teachers' practices in terms of when oral reading was used, how oral reading was managed, and what occurred during oral reading (e.g., types of teacher interruptions).

In order to determine when teachers used oral reading, we defined oral reading in terms of students' first exposure to a text. Of the 38 teachers analyzed from classroom narratives, 26 involved students in oral reading

in association with first exposure to text⁸ (15 interrupting students during oral reading). Of the 14 teachers videotaped, 9 used oral reading as a first exposure practice. (Three teachers in the videos [Ad, Fb & Fe] used oral reading as a postreading activity with varied purposes, ranging from oral rereading of the silent reading assignment to oral reading of specific sentences as confirmation of answers to comprehension questions.)

Oral reading practices were observed in three scenarios: (a) traditional round-robin reading—encircled group of students reading orally, order of reading determined by the location of the student in the circle; (b) modified round-robin—students in groups randomly assigned a page or paragraph to read, or students volunteering to read; and (c) paired oral reading—teams of two students taking turns reading aloud, with partner reading silently and providing help.

While teacher interruptions during oral reading were categorized by signal and unsigaled prompts, analysis from the videotapes provided additional subcategorizations. Teacher responses to signaled interruptions fell into four subcategories: (a) provided phonic sound or morphemic unit, (b) provided whole word, (c) provided phrase or sentence, and (d) provided definition/related information. Often, teacher responses incorporated several of these subcategories within one interruption. Equally as varied in use were the three subcategories of teacher responses to unsigaled interruptions: (a) provided word, (b) provided phrase or sentence, and (c) provided definition/related information.

4. Vocabulary: Thirty-one of the 38 teachers were observed teaching vocabulary. Fifteen taught vocabulary in the context of the text that was to be read or had just been read, while 16 taught vocabulary out of context. Eleven teachers in the videotapes taught vocabulary, with 6 using instruction in context and 5 using instruction out of context.

Vocabulary instruction out of context included phonetics/pronunciation, definition/dictionary work, and isolated sentences (not text-related). Vocabulary instruction in context included sentences from the story to be read and vocabulary instruction occurring during reading. Teachers often combined instructional approaches within a context focus. For example, one teacher labeled as using out-of-context instruction listed words on the board, asked students to pronounce each word in unison, and then assigned students to look up word definitions in the dictionary (Fa). A teacher labeled as using in-context instruction asked students to read specific sentences from the story to be read and then to define the word using the context of the sentence (Ac). Some teachers incorporated both in-context and out-of-context approaches within their vocabulary instruction.

Relationships

Table 4 summarizes the number of cases in which both interview and observation or interview and videotape could be compared, and the percentage

of agreement. Percentage of agreement in the six categories ranged from 66% to 92%. The least amount of agreement occurred in the flexible/inflexible use of basals category, with many more teachers indicating flexible use in their interview than were observed in their classrooms. This could have been due to a certain amount of nervousness on the part of teachers being observed or to the fact that teachers think about flexibility differently than the observers or describe their practices differently than they enact them. The relationship between interview and observation in the category of oral interruptions could have been caused by the difficulty of determining interruptions in the narrative observational approach that focused on teachers' practices. This would seem to be a valid explanation given the 90% agreement between the interviews and videotapes in which interruptions could more easily be observed.

Cases: Contradictions and Mismatches

In viewing the data in Table 4, it is clear that, for most categories, practices could quite accurately be predicted from belief interviews. As mentioned above this was not the case for two categories: the degree of flexibility in using the basals and the interruptions during oral reading in the interview/observation relationship. While the rest of the agreement percentages are quite high, there is still a question as to why agreement is not perfect. Qualitative analysis can help answer this question.

One explanation for the mismatches could be attributed to those teachers who exhibited seeming contradictions in their belief interviews. There are instances in which an individual teacher's interview contains statements that could be placed on both sides of either the teaching of reading continuum or the location of meaning continuum, or both. These are called seeming contradictions because the analytic framework was developed by

Table 4
**Percent Agreement Between Interview and Narrative Observation
and Interview and Videotape**

Reading practices interview	Narratives observations		Videotape observations	
	Number	%	Number	%
Use of basals	34/38 ^a	89%	10/14	71%
Flexibility	19/29	66%	7/10	70%
Consideration of back. knowledge	31/38	81%	12/14	86%
Oral/Silent reading	25/29	86%	12/13	92%
Interrupt/Oral	17/22	77%	9/10	90%
Vocabulary in context	25/31	80%	8/11	73%

^aThirty-eight instances of both interview and observation in this category and 34 instances of agreement.

researchers and, within an individual teacher's own framework, the statements may not be contradictory at all. Appendix D summarizes the seeming contradictions in categories that emerged from the data (Spradley, 1980) and indicates that, in fact, most of these contradictions may be explained by a more complex view of students and/or teaching. For example, a number of the seeming contradictions revolved around a different concept of the purpose of reading, depending upon the subject matter.

Eighteen teachers exhibited seeming contradictions on either the horizontal or vertical continuum, or both, in the theory analysis. These 18 were also examined in terms of the accuracy of the predictions based on their beliefs. These 18 teachers averaged two disagreements between beliefs and observed practices and accounted for 36 of the total number of 50 disagreements (see Table 4). This suggests that the seeming contradictions accounted, in part, for the mismatches between beliefs and practices.

In addition to the situation in which a teacher was placed at different points on one continuum, eight of the teachers in this analysis displayed contradictions on both continua. This placed them in opposite quadrants. In all cases, the two quadrants were I and III. In six of these cases, the answers to questions designed to elicit their general or public beliefs placed them in Quadrant III. However, when they described their beliefs in action, that is, what they do on a daily basis, their statements placed them in Quadrant I. One of these teachers (Af), in fact, did not seem to operate from a theory of reading at all when she described her classroom practices, but from a theory of helping students survive and figuring out what other people (such as teachers and test developers) want. Thus she was promoting skills related to strategies designed to get the right answers even if her students couldn't read the passage.

To provide a sense of how these seeming contradictory beliefs can be seen in the practices of the teachers, the case of Susan was developed and is summarized in the following paragraphs.

Susan had been teaching for 17 years in elementary schools. When we first talked with her, she was teaching a 4th and 5th combination, the highest level she had taught. Susan was enthusiastic about teaching and about her students. She indicated in her interview that her students' parents strongly supported her, and that she felt free to try all sorts of different approaches as long as she took the time to explain to the parents what she was doing.

Susan was interviewed in early spring of 1988. In response to the general questions concerning reading comprehension, she expressed a quite constructivist view of reading comprehension:

The one thing I try to do more than anything else, in teaching reading, is find some experience that they have in their life to relate to the story. . . . I do that purely because I've read the research that proves that's how children comprehend. . . . If they can't relate anything to this story, I don't know if it's going to have any meaning for them.

At the same time, she indicated that social studies is quite different from the stories. "It's hard to give social studies meaning," she complained. In social studies, there are "correct" answers, and these come directly out of the text.

Susan also stated that she recently realized that it is not necessary to rush through the basal reader and cover everything. In fact, she stated, that's no good for the children. She had attended a workshop that stressed cognition and the deep coverage of material. She feels freer this year, she stated, to slow down and do more literature. When she was asked to describe her reading program, however, Susan indicated a strong although flexible reliance on the basal. Further, she still seemed concerned about content coverage and "getting through the basal." In fact, she indicated that she is "rushing through it" so that the class can read four literature books at the end of the year. Thus, her interview indicated public or declared beliefs that would place her in Quadrant III, and private beliefs, or beliefs in action, that placed her in Quadrant I.

The two spring, 1988, observations indicated that she relied heavily on the basals. The classes were organized in grade-level groups. Both lessons involved story comprehension with prevocabulary coverage, oral reading of text, and comprehension questions following the story. In one of the lessons, students were asked to work on some worksheets related to the concept of main character. What made the lessons flexible, however, were her discussions with the students about the story, in which she worked considerably with their background knowledge, including linking the story with others that they had read that year. In addition, in her vocabulary work she stressed that the words should be determined from their sentence context.

In the fall videotape, Susan began her lesson by telling students that they were going to read some ghost stories in the basals and that she was going to read one to them first. She showed them the pictures and asked them to make predictions and then read the story orally. She then spent considerable time preparing students for the story in the text: activating background knowledge and feelings of being scared, working on some vocabulary words, and spending considerable time on the concept of figure of speech. She then asked the students to read the basal story orally with another student.

Susan's contradiction in the initial interview between her public statements about reading comprehension and her beliefs in action as indicated in her descriptions of how she taught reading, seemed to indicate that she was moving toward a more literature-based approach. She was already moving away from the beliefs that meaning is in the text and that the purpose of reading is to obtain the "correct" answers. While her spring observations revealed pretty standard basal lesson formats, her fall videotape did not. Her interest in literature was revealed in the discussion of the basal

story in the spring, but the literature aspect of the reading lesson dominated the fall lesson. Thus, Susan's contradictions between her public statements about reading and her beliefs in action seemed to indicate that she was in the process of changing her beliefs and practices from Quadrant I to Quadrant III.

Susan was highly articulate in stating her beliefs, and her practices were clearly changing during the period that we were observing them and prior to our intervention with a staff development program. Five other teachers displayed similar seeming contradictions in their original belief interviews, and we would predict that they would have changed practices in a manner similar to, but perhaps slower than, Susan's. However, we were not able to determine this prior to our intervention.

Discussion

This study demonstrates that the beliefs of teachers in this sample, as assessed in an ethnographic belief interview, relate to their classroom practices in the teaching of reading comprehension. Prior work on the relationship between classroom practices and beliefs in the area of reading has produced contradictory results. Deford (1985) found that observers of 14 teachers were able to predict the teachers' overall score on the TORP measure of teacher beliefs. However, Hoffman & Kugle (1981) were unable to predict specific classroom behaviors on the basis of TORP scores. Two major differences between the two studies were that Deford's predictions were more global than Hoffman and Kugle's, and her design moved from observation to prediction of beliefs. Hook and Rosenshine's (1979) summaries of studies also indicated that predictions from paper-and-pencil measures could be made for global teaching approaches, but not for specific behaviors.

In our study, which reflects the Hoffman and Kugle design more than the Deford design, we were able to predict specific classroom behaviors on the basis of the analyses of the belief interviews. It is perhaps the case, as Hoffman and Kugle suggested, that a multiple-choice measure of beliefs is ineffective for predicting specific classroom practices because teachers feel restrained by the specific choices in the items. Our belief interviews were quite revealing of the ways the teachers think about reading and learning, and how they practice in the classrooms. The relatively strong relationship between teachers' stated beliefs about the reading process and their classroom practices allows us to give credence to the beliefs as stated and, therefore, to the way they were elicited.

This study has also given us information about the reading comprehension instruction process, at least in this sample of schools. Considerable effort recently has gone into disseminating research related to the learning and instruction of reading comprehension that suggests a more interactive approach to learning. This approach promotes practices focused on activating and building on students' background knowledge, teaching vocabulary

within story or content-related context, and including authentic literature in the reading program. However, a majority of teachers within this sample neither held theories of reading that would accommodate these new ways of thinking nor practiced them in their classrooms. Their teaching was dominated by basal readers which focused on the skills of reading. Although they used basals somewhat flexibly, these materials still governed the teachers' thinking about the teaching of reading.

One quite speculative conclusion from this study relates to the process of teacher change. The results of the study suggest that a lack of relationship between beliefs and practices may indicate that the teacher is going through a change process. In the case of Susan, it appeared that changes in beliefs were preceding changes in practices—a finding that is contrary to a popular model of staff development that is based on the notion that changes in teacher belief follow changes in teacher behavior (Guskey, 1986; see, also, Fullan, 1985). Guskey's (1986) model suggests that only when teachers see positive results of different behaviors in terms of student learning do they begin to change their beliefs. While Guskey's model may be the case for some teachers and some beliefs and practices, the case of Susan suggests that the belief change process may precede major changes in practices.

However, focusing simply on beliefs or behaviors in a staff development process may not lead to authentic change. We saw several instances of teachers trying to use a practice, such as activating background knowledge, but the attempts were weak and ineffectual. These were teachers who, when interviewed, did not express an understanding of the supporting theory. Alternatively, we talked with teachers who were developing different ways of thinking about the teaching of reading, but did not know the practices that would allow them to act upon those beliefs.

One could conclude, then, that genuine changes will come about when teachers think differently about what is going on in their classrooms, and are provided with the practices to match the different ways of thinking. The provision of practices without theory may lead to misimplementation or no implementation at all, unless teachers' beliefs are congruent with the theoretical assumptions of the practice. Further, programs in which theory is discussed and which focus on changing beliefs without proposing practices that embody those theories may lead to frustration. If this is the case, staff development programs should weave three forms of knowledge together: teachers' background theories, beliefs and understandings of the teaching and reading process; theoretical frameworks and empirical premises as derived from current research; and alternative practices that instantiate both teachers' beliefs and research knowledge.

APPENDIX A

Teacher Belief Interview

Background:

Number of years teaching? Grade levels? Types of Students? Preservice education: where? special program? reading program? Student Teaching: where? when? How did the cooperating teacher teach reading? Any innovative instruction in his/her class? Probe—quality of student teaching experience?

Reading and Learning to Read:

When a student enters into grade __, what should that student be able to do in terms of reading? Probe—your conviction, not what the program expects. What can a really good reader do (difference between good and poor reader qualitative or quantitative)? When that student leaves grade __, what can she do? So, how has that student learned to read up to grade __? What accounts for the differences between a good and poor reader? Probe—parents? genetic? good teaching? learning style? Is it possible for a teacher or other person to help a poor reader become a good reader? How do you define reading comprehension? What is included in that?

Reading Instruction:

Could you describe the way you teach reading comprehension? Probe—typical day? reading out loud? Objective—vocabulary? remembering ideas? memorizing facts? Questioning students—why? what is a good response? what is a poor response? what is a creative response? Where did you learn to teach reading that way? Have you ever had inservice/graduate courses on how to teach it? Have you ever tried something different? Why? What happened? Have you ever wanted to do something different? Grouping: on what basis? why? Probe—do you change the groups? why? Have you ever tried to teach the whole group? Under what conditions would you do so? Do you do different things in the different groups? Why? What indicates to you that a lesson is going poorly? How is teaching reading different from teaching math? from teaching science or social studies? from teaching writing? Probe—more/less difficult? less clarity about objectives? Do you ever feel like you are getting behind in reading?

The Students:

Describe the students in your class. Do they have a pretty good chance of making it through school? Describe a student who is having great difficulty in reading. Probe—cause? what is teacher doing about it? Describe a student who is just slightly behind—not terrific, but not a real problem (probe on same). Describe a student who is really doing well. Probe—cause, etc.?

The School:

Do you feel that there is a characteristic way of teaching reading comprehension in this school? Do you know what the other teachers are doing? I mean sort of? How do you know? Do you ever observe in other classrooms? Do you exchange materials, ideas, methods? Communication with other teachers? Specialists?

Personal Reading:

What types of things do you read now? (When you have a chance?)

APPENDIX B

Coding System: Reading Instruction Study Belief Interview

The Teacher

Preservice teacher education

Student teaching

Experience

Anxiety

TE

ST

EX

AN

Teachers' Beliefs and Practices

Efficacy/Attribution	EF
Origin of teaching practice	OR
Personal Reading	PR
<u>Students</u>	
Students	S_
Teacher's expectation for students	SE
Good readers	SG
Poor readers	SP
Average readers	SA
Learning disability	LD
Motivation/Self-Concept/Affect	AF
<u>Reading/Language</u>	
Reading	R_
Reading comprehension	RC
Vocabulary	V_
Spelling	SL
Word	WO
Talking/Communicating	T_
Listening	L_
Listening to read	LR
<u>Teaching/Teaching Reading</u>	
Teaching—General	TG
Peer teaching	PT
Teaching reading	TR
Basals	B_
Questioning	Q_
Other texts (inc. library)	TX
Grouping	GR
Grading/Assessment	G_
<u>Other Subjects</u>	
Art	A_
Social Studies	SS
Science	SCI
Writing	W_
Math	M_
<u>School</u>	
School	SC
Other teachers	OT
Specialists	SPE
Principal	P_
Parents	PA

APPENDIX C

Descriptions of Teachers in Four Quadrants

Quadrant 1: Fc is a fifth grade teacher in her ninth year of teaching. She remembers her cooperating teacher as being very structured and as a teacher who “taught straight out of the book, just like me.” When students enter Fc’s fifth grade classroom, they should have “word attack skills, should be able to read orally at

their grade level without stumbling, and should be able to transfer that reading into other subjects, and understand what they read. They should know the meaning of many words, and they should know how to write contractions." At the end of grade five, "they should have developed a larger vocabulary and be able to use that vocabulary in their oral and written work." She defined reading comprehension as "understanding what is read and being able to give it back."

Fc described her teaching of reading comprehension as following the book, and doing two stories a week. She grouped the students on the basis of their word attack skills, and feels quite inflexible about following her plans for reading. She feels frustrated by the District policy that does not allow her to move her good fifth grade readers into the sixth-grade basal. She had a number of enrichment activities in the class, including a literature book once a week. She feels that this motivates the students to read, but she does not equate this activity with teaching reading. While she had taken a "Whole Language" course recently, she did not feel that it had much to do with teaching reading.

Quadrant 2: Cb is a grade 5 teacher in his third year of teaching. He teaches the whole group because he does not want to label students, and he feels that the good readers can model effective reading practices to the poorer students. The problems with the poorer students, he suggests, is that they focus too much on the word, and do not seem to be able to move ahead and understand the flow. He blames this, to a certain degree, on their not understanding the "connection between visual language and expression," possibly because they have not read aloud enough, or been read to.

When Cb talks about what the students read, he focuses on the story and whether it is interesting to the students. He views the learning of reading to be "magic" and, thus, teaching reading involves giving them interesting material: "giving them things that are challenging, interesting, fun, to give them success all at the same time. . . it's like reading readiness. I don't know, maybe I don't know a lot about it, but I think it's magic, you know, it just sort of happens and I think these kids are going to learn when they're ready to and what's going to make them ready, I don't know." He states that he uses the basals around 60% of the time, in part because they mirror what will be on the achievement tests. He also structures his nonbasal comprehension teaching around basal-like formats. For example, he wants them to learn about characterization, main idea, and understanding vocabulary within context.

He describes reading comprehension as "completely understanding the story." Whether it is a piece of fiction or biography, history or technical piece, "it's being able to know what is going on, who is doing it, be able to describe what they're about and, in general, the sequence of what happens." He does, however, insist that the students provide the answers "in their own words. So I try to do a lot of processing of the information, so that it looks a little bit different, but it says the same thing."

Quadrant 3: Be has been teaching for 13 years, primarily in bilingual classrooms. The class, this year, is a nonbilingual fifth grade. When students enter her fifth grade, Be hopes that they are able to "get some meaning from the printed page: something to relate to their past experience." Her goal in teaching reading is to get the students interested in books, in good books. She defines reading comprehension as: "It's a means of communication from the printed page to the child's experience. Deriving meaning from it. Understanding what the message is." She does not like to segregate reading and writing and feels that having students write books is an excellent way to involve them in reading.

Be uses basals in groups. The groups are voluntarily formed every day. The students decide whether to read out loud or silently and ask many of the questions

both during and after reading the story. She likes “What if” questions and responses. Sometimes she asks the students to write the answers to questions and slips in a little skill teaching, for example, on punctuation. She judges whether or not she is behind in reading on the basis of what the students are selecting to read: “When I still have a child that is reading *Skateboard* magazine and nothing else, then I feel I’m behind.”

Quadrant 4: Cc has been teaching for more years than she cares to remember, both on an Indian reservation and in border towns with large populations of Hispanic students. For Cc, reading is being able to read out loud, although she later states that students who read orally are not necessarily understanding the passage. Reading comprehension is “being able to function, whether it be reading directions or reading a paragraph.” She feels that it would be detrimental for students not to have a structured scope and sequence program.

Cc uses the basal and does a lot of “word-meaning-type activities with work sheets. Word meaning is the most important thing for these kids.” During and following the reading of a passage, most of her questions concern the meanings of words. Vocabulary is the most important skill on the worksheets. Her students do go to the library, but this is not viewed by Cc as teaching reading, but as a reward for finishing their work.

In Social Studies reading, Cc emphasizes questions that do not have a right or wrong answer. While she emphasizes the “right answers” on the worksheets, she is also aware that students have different and equally valid views of what a word means. She understands this because she has “worked with lots of minorities.”

APPENDIX D

Categories of Seeming Contradictions on the Two Continua as Elicited in the Belief Interviews

Location of Meaning Continuum (from “meaning is in the text” to “meaning is constructed”): 1) The position on continuum depended upon the subject matter or the types of questions being asked. Many teachers suggested that, in social studies, the meaning is in the text and that the purpose is to answer the questions correctly, while the literature text is meant to be read in a constructivist manner. 2) A movement toward the constructive end, but for purposes of motivation. For example, a teacher might make statements that, in general, there is a “correct” answer that relates to exactly what the author meant, but sometimes questions are asked that require students to relate material to their own experiences. But the latter is for motivational purposes. 3) Contradictory: In two instances, an individual’s several statements indicated either extreme theoretical complexity or confusion. For example, one teacher stated that “different people have different definitions of words, and that’s okay,” but the “correct meaning” is in the text.

The Teaching of Reading Continuum (from a “skills/word” to a “literature” approach): 1) Skills approach should be used on younger or less able students, but literature is for older or more effective readers. 2) Skills is what readers should be able to do, but literature is used to “hook” a student into reading. 3) The teacher is doing skills now, but wants to move toward more of a literature approach. 4) Skills is what you have to do because of the curriculum, but literature is what reading is.

Notes

¹This project was sponsored, in part, by the Office of Educational Research and Improvement, U.S. Department of Education. The opinions expressed in this article do not necessarily reflect the position, policy, or endorsement of the Department of Education.

²A subsample of the interviews was examined by a graduate research assistant who agreed, in every case, with the placement of teachers within the quadrants.

³The language used to describe these belief statements has been adapted from Green (1971) and Fenstermacher (1978 & 1986) who suggest that practical arguments, consisting of empirical, value, and situational premises, lead to actions. We have added a different type of premise—stipulative. In the reading field (and probably many fields in education), there are several different ways of defining and thinking about reading. Thus, these stipulative premises are important in a practical argument.

⁴The teachers were identified throughout the study by the school they were in (the capital letter) and their own identifying letter (the second letter).

⁵For purposes of developing a sense of reliability, the theoretical orientations and belief statement predictions were conducted separately. At the completion, the two researchers looked at both analyses and resolved disagreements, of which there were only two. In addition, all four researchers discussed, on a regular basis, the meaning of the different constructs to ensure that there was reliability among the four in terms of the meaning of the categories.

⁶The basals in use were published between 1981 and 1984. More recent basal readers have more of a literature base.

⁷One of the 39 teachers was not observed in the spring, but was videotaped the next fall.

⁸Eight of the lessons in the narrative observations and two of the videotapes did not involve students reading text. These were primarily grammar lessons.

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